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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,092	10/17/2003	Mariastella Scandola	023349-00283	9101
116	7590	09/30/2005	EXAMINER	
PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/687,092

Applicant(s)

SCANDOLA ET AL.

Examiner

Olga Asinovsky

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12,14,15,17 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,14,15,17 and 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/897,984.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12, 14, 15, 17 and 20-31 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Missing functional group Y in the formula (I) in each independent claims 12, 14, 15 and 17 is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). A polyether must have a functional end group. The issue of the invention is that the functionalized polyether is chemically reacted by grafting with natural fibers (for claims 12 and 15) wherein said natural fibers have salified alcoholate groups (for claims 14 and 17). In the specification at page 11, lines 18-20 and 24-26 "the polyether chains are ready-made before being grafted on the activated fiber." "Preferably the polyether is one having an aliphatic or aliphatic/aromatic group at one end and a leaving group at the other end." In the present amendment both ends can have an aliphatic or aliphatic/aromatic group because "x" can be  $(-CH_2-)_n$  by formula (II) at page 12. The functionalized polyether having formula (I) at page 12, line 5, having Y functional leaving group is critical in the present invention. Moreover, in the amended claims formula (I) the polyether even has no "OH" terminal group.

***Claim Objections***

3. Claims 12, 14, 15 and 17 are objected to because of the following informalities: the "X=" is confusing because "=" could be considered a double bond. Suggested, where X is ... Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 12, 15 and 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1,590,176.

The present claims do not require that the natural fiber be pretreated. By the amendment of July 14, 2005, there is no requirement that a polyether has been functionalized.

Reference has been discussed in the office action mailed on 01/11/2005.

GB'176 discloses modified cellulose hydrate material with an oxyalkylene polymer having functional groups, pages 6-13. The oxyalkylene polymer in GB'176 is readable in applicants' claims (for example, claims 23 and 25). The cellulose hydrate materials having naturally OH functional group on their surface have been reacted with a polyethylene glycol or its derivatives, pages 6-13. The polyoxyalkylene at page 6, line

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5, having "n" in the range between 1-120 is within the range specified in the present claims.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14, 17 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee U.S. Patent 3,492,082 in view of GB 1,590,176.

Lee discloses a cellulose material having hydroxyl groups that are converted to sulfonate groups, and then, a graft polymerization of said modified cellulose material with polymerizable monomer having at least one vinyl group and functional group(s), col. 2, lines 14-30 and col. 8, lines 20-62.

Lee does not disclose functionalized polyether.

GB'176 has been discussed in the paragraph 5 above.

The polyoxyalkylene having functional group "OH" and amino group is readable in the present applicants' claims. The present claims do not specify functional groups. In the amended claims 14 and 17 in the formula (I) there is no functional group.

Both references disclose a chemical reaction between the cellulose material and functional group of other polymer. It would have been obvious to one of ordinary skill in

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the art to modify a grafted cellulose material in Lee invention by employing an oxyalkylene polymer having functional group(s) as disclosed by GB'176 because any additional functionalized polyether for treating a cellulose material is expected in Lee invention as being an additional hydroxyl-containing polymer grafted on to a cellulose backbone, Lee, col. 2, lines 10-12.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.A.

OA

September 23, 2005



James J. Seidleck  
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